

Abstract

A method of and arrangement for buffering, during at least a predetermined retention time, a digital optical signal ($S(i)$, $i = 0, \dots, 3$) having a predetermined digital level is described. In one illustrative embodiment, the method includes inputting the
5 optical signal ($S(i)$) to an optical input of a semiconductor laser element ($SLE(i)$) and injecting an injection current to the semiconductor laser element ($SLE(i)$) to establish an optical gain process in the semiconductor laser element ($SLE(i)$), the injection current having an amplitude such that the optical gain process and an optical absorption process within the semiconductor laser element ($SLE(i)$) outweigh one another longer than the
10 retention time in order to keep the digital optical signal on the predetermined digital level during the retention time.